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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|--------------------------------|----------------------|
| 10/717,966 | 11/21/2003 | Yang Hwan No | K-0552 | 8017 |
| 34610 | 7590 | 05/17/2006 | EXAMINER PATEL, RITA RAMESH | |
| FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153 | | | ART UNIT | PAPER NUMBER 1746 |

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/717,966 | NO ET AL. | |
| | Examiner Rita R. Patel | Art Unit 1746 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 21 November 2003.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 21 November 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

Acknowledgement has been made of applicant's claim for priority under 35 U.S.C. 119.

Drawings

The drawings received 11/21/03 are acceptable for examination purposes.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "a sensor installed at the tube to sense the water level" in line 12; there is insufficient antecedent basis for this limitation in the claim. Claims 2-10 and 20 are dependent claims and therefore rejected for aforementioned reasoning.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 9, 11-15 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Knoop et al. herein referred to as "Knoop" (US Patent No. 4,835,991).

Knoop teaches an automatic washing machine 10 comprising a cabinet or housing 12, an imperforate tub 14, a concentrically mounted basket 16 with a vertical agitator 18, a water supply 19, an electrically driven motor 20 operably connected via a transmission to the agitator 18 and a pump 24 driven by the motor. Controls 28 includes a presettable sequential control means for use in selectively operating the washing machine through a programmed sequence of washing, rinsing and spinning steps provided on a console panel 30 (col. 3, lines 7-20). The pressure sensor 44 comprises two interconnected chambers 50, 52 which are connected by a conduit 54. The use of two separate vertically spaced openings 56, one near a bottom of the chamber and one near a top of the chamber, is done to let water completely fill the first chamber 50 at least to a level above a connections point 58 of the connecting conduit 54 and also to permit the chambers 50, 52 to completely drain at the end of a wash cycle. The connecting conduit 54 enters at a bottom point 60 of the second chamber 52 which is at an elevated position relative to the connecting conduit 54. Another conduit 62 connects at top opening 64 of the second chamber 52 and is connected to an electronic pneumatic pressure transducer 64 which provides as an output a square wave whose frequency is a function of pressure and sends a signal to a microprocessor 68 (col. 4, lines 1-3, 8-23). Knoop discloses that because air is trapped in the second

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chamber 52, as the water level in the tub increases, the trapped air within the second chamber 52 and conduit 62 will become increasingly pressurized and this is reflected by the signal sent from the pressure transducer 64 to the microprocessor 68 (col. 4, lines 29-34). The connecting conduit 54 between the two chambers 50 and 52 has a horizontal component 54A which is mounted to the tub below the second chamber 52 and below the minimum fill level (col. 4, lines 41-44). The following teachings of Knoop read on applicant's limitations: chamber 50 reads on a protecting member; connecting conduit 54 reads on a drainpipe; chamber 52 reads on an air chamber; conduit 62 reads on an extension pipe; electrical pneumatic pressure transducer 64 and microprocessor 68 reads on a sensor. In Figure 2, chamber 50 fixes chamber 52 to the peripheral of the washing machine.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-8 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knoop as applied to claims above.

Knoop teaches the claimed invention, however, conduit 62 is not shown in detail to have connection means by way of a rib. It would have been obvious to one of ordinary skill in the art at the time of the invention to connect cylindrical conduit 62 and

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pressure transducer 64 by a ribbed formation as commonly known in the art and shown by the connection of conduit 54 and chamber 50. As seen in Figure 2, the rib, if situated at the neck of the connecting portion between the circular chamber 52 and the connection of conduit 62 must extend higher than the connecting portion, as conduit 62 extends vertically upward directly at this connection. It is well settled that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 124 USPQ 378 (CCPA 1960).

Claims 10 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Knoop as applied to claims above, and further in view of Gilbreath et al. herein referred to as "Gilbreath" (US Patent No. 6,447,017).

Knoop fails to teach detailed connection means, namely a boss and flange for attaching a protecting member comprising a boss formed at the tub and a flange formed at the air chamber to be coupled to the boss, but bosses and flanges are commonly known in the art of washing machines and pipes to be used as connection means. Gilbreath prefaces said fluid coupling assembly by disclosing the connection of coupling 20 of the present invention to a second fluid transfer component, the second coupling connection end 32 of the stem portion 28 may be coupled to hose 7 or other component, e.g., a second equipment port, rigid pipe or tubing, etc., via conventional connection means well known to the art, and with respect to connection to hydraulic or other high- or medium pressure-rated hose, such connection means include but are not limited to the use of annular flanges (col. 10, lines 13-20). Gilbreath teaches the

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equipment connection end of the first fitting may however have any suitable profile, including but not limited to a boss type (col. 4, lines 64-66). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the usage of bosses and flanges in Knoop for providing attachment means thereunto.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rita R. Patel whose telephone number is (571) 272-8701. The examiner can normally be reached on M-F: 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RRP



MICHAEL BARR
SUPERVISORY PATENT EXAMINER